Technical Interview - String Calculator

General Instructions

- Use your language of choice.
- Write tests.
- Focus on simplicity.
- Please leave you code in a runnable state so we can go over your code and example outputs together during your on-site.
- Work incrementally. Don't read ahead too far, trick is to complete one task, then move on.
- You can assume correct inputs. Don't worry about a tonne of edge cases.

String Calculator

1. Create a simple String calculator with a method: int Add(string numbers)
    a. The numbers in the string are separated by a comma.
    b. Empty strings should return 0.
    c. The return type should be an integer.
    d. Example input: "1,2,5" - expected result: "8".
    e. Write tests to prove your input validates.
2. Change the Add method to handle new lines in the input format
    a. Example: "1\n,2,3" - Result: "6"
3. Support a custom delimiter
    a. The beginning of your string will now contain a small control code that lets you set a custom delimiter.
    b. Format: "//[delimiter]\n[delimiter separated numbers]"
    c. Example: "//;\n1;3;4" - Result: 7
    d. In the above you can see that following the double forward slash we set a semicolon, followed by a new line. We then use that delimiter to split our numbers.
    e. Other examples
        i. "//$\n1$2$3" - Result: 6
        ii. "//@\n2@3@8" - Result: 13
4. Calling add with a negative number should throw an exception: "Negatives not allowed". The exception should list the number(s) that caused the exception

Bonus

1. Numbers larger than 1000 should be ignored.
    a. Example "2,1001" - Result: 2
2. Delimiters can be arbitrary length
    a. "//***\n1***2***3" - Result 6

3. Allow for multiple delimiters
    a. “//$,@\n1$2@3” - Result 6
4. Combine 2 and 3 bonus questions. Allow multiple delimiters of arbitrary length